

REMARKS

Reconsideration and allowance of this application are respectfully requested in view of the above amendment and the discussion below.

Applicants invention concerns an electroacoustic sound generator for a motor vehicle, which improves previous sound generation devices by adding artificial sound signals to normal sound components coming from measured sound pressures. This produces an overall desirable sound as well as an authentic sound.

The present invention, as defined by independent claims 1 and 9, uses a sound pressure sensor 12 positioned in the vicinity of the intake and/or exhaust of the motor vehicle in a signal processing unit 14, which received the output of the sound pressure sensor. A synthesizer 40, either a part of or connected to the signal processing unit 14, adds synthetic sound components to the signal generated from the sound pressure sensor.

Claims 1, 4, 5 and 9 have been rejected under 35 U.S.C. 102 as being anticipated by the reference to Miller (U.S. Patent 5,237,617), as indicated at item 4 of the Office Action. Applicants traverse this rejection on the grounds that Miller does not show the claimed feature of Applicants' invention with respect to the addition of synthetic sound components to the signal from the sound pressure sensor 12.

The reference to Miller '617 feeds the output of sensors 23 and 24 to an analyzer, which also receives several signal inputs from sensors 13, 14, 16, and 17. These signals are combined and subsequently analyzed to produce a digital signal output indicative of the engine operating conditions. The digital output signal on lead 28 represents the overall engine operating conditions, as indicated at column 4, lines 5-7. This output is then fed to the digital synthesizer 32 which, in turn,

produces signals which emulate sounds of the engine and exhaust from any number of different automobiles.

Applicants submit there is no showing in Miller whereby synthetic sound components from the synthesizer are added to signals generated from a sound sensor. The output of the synthesizer 32 of Miller is directly converted and fed into the speakers, in contrast to the claimed invention.

Each of independent claims 1 and 9 recite that the synthetic sound components are added to the signal generated from the sound pressure sensor. This does not occur in the reference to Miller and it is not an obvious variation to one of ordinary skill in the art.

The dependent claims 4 and 5 each contain the limitations of independent claim 1 and are also patentable over the reference to Miller.

Claim 1 has also been rejected under 35 U.S.C. 103 as unpatentable over Hennl 18385 in view of Tanaka et al. U.S. Patent No. 5,692,052 as indicated at item 6 of the Office Action. Claims 2, 3 and 7 have been rejected over the combination of Miller and Tanaka et al.

With respect to the rejection of claim 1 as unpatentable over Hennl, Applicants submit that the abstract and the accompanying figure of Hennl, which was used for the basis for the rejection, does not disclose that the output of the synthesizer is added to a signal from a sound pressure sensor, even if it is accepted that the sensor 3 is a sound pressure sensor and/or it could be a sound pressure sensor. The synthesizer outputs a signal which is directly fed to the speakers without any addition being made. The reference to Tanaka et al. '052, even accepting the statement of the rejection for the teaching of the use of a pressure sensor, adds nothing toward meeting the claim limitations of independent claim 1.

With respect to the rejection over the combination of Miller '617 and Tanaka et al. '052 for the dependent claims 2, 3 and 7, Applicants submit that these dependent claims contain all the limitations of independent claim 1 and the reference to Tanaka adds nothing toward meeting those claim limitations whether combined with Miller or the Hennl reference.

Claim 6 has been rejected under 35 U.S.C. 112, second paragraph, as being indefinite with respect to the term "push operation". In response to this rejection, Applicants have amended the specification and the claims to refer to a "thrust" operation, which is a more clear translation of the German word "Schubbetrieb". When the automobile accelerates, or a thrust is produced by the engine, the appropriate sound will be generated, as discussed at page 5 of the present application.

Additionally, Applicants have amended claim 6 to indicate that the output of the synthesizer provides a predefined sound in response to an indication of a thrust operation of the motor vehicle. Such claim structure is supported by the specification and the drawings and no new matter is added by this change.

Therefore in view of the distinguishing features between the claimed invention and the references, which features are not shown or disclosed or made obvious by the references or their obvious combination, Applicants respectfully request that this application containing claims 1-9 be allowed and be passed to issue.

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If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #080437.48943US).

Respectfully submitted,

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For Jeffrey D. Sanok Registration No. 32,169
*Ry No
39-004*

CROWELL & MORING, LLP
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844

JDS:adb